NOTE XXX.

SOME OBSERVATIONS RELATING CYNOPTERUS BRACHYOTIS MÜLLER AND KERIVOULA PELLUCIDA WATERHOUSE

BY

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Cynopterus brachyotis S. Müller.

In van der Hoeven's Tijdschrift voor Natuurlijke Geschiedenis en Physiologie, 1838-39, a small bat has been described by Dr. S. Müller under the name *Pachysoma brachyotis*. That author collected a large number of specimens, all in the same locality, a deep lime-stone cave, on the bank of the river Dewej, in the interior of Borneo: these type specimens are in our Museum.

Dobson (Catalogue, 1876) remarks under the head *Cynopterus brachyotus* that an examination of the types of *brachyotus* (lege *brachyotis*) in the Leyden Museum has shown him that the Andaman-island variety (described by him in 1873 as *Cynopterus marginatus*, var. *andamanensis*) is identical with Müller's species. In the well-known Catalogue published by Dobson in 1878, no word however, concerning this species; *Cynopterus brachyotis* Müller seems to be entirely overlooked by that author. I am not aware that the species has been recorded or mentioned after the year 1876, neither in the P. Z. S. nor in any other periodical, so that I fear that it is on the way to disappear among

its fellows; the more as Dobson has bestowed the specific title of *brachyotis* upon a new species of the with *Cynopterus* so closely allied family *Cynonycteris* (see P. Z. S. 1877 and Catalogue, 1878) and so one perhaps might confound them and believe that Müller's *brachyotis* would be the same as Dobson's *brachyotis*, meanwhile they represent two well defined and really very different species, belonging to two distinct families.

Müller observed that *brachyotis* is about one third smaller than *titthecheilum* (= *marginatus*), for the rest colored like that species, the wings however being darker, of a sooty color, meanwhile the ears present too a sooty color: Temminck (Mon. mamm. II) compared the type-specimens with *Pachysoma brevicaudatum* (= *C. marginatus*) and remarked that Müller's *brachyotis* »diffère néanmoins par ses petites oreilles courtes, arrondies, dépourvues de toute bordure marginale et de plis verticaux internes; elles sont aussi moins larges et toujours d'une couleur noire." Although Müller's specimens are at present nearly white, with exception of the reddish colored collar, so that the dark tinge of ears and wings has disappeared (they have been preserved in a stuffed state and have been bleached by the influence of light), the white margin of the ears, however, is very clear to see, so that I cannot understand how Temminck overlooked this characteristic and could write that the ears are »dépourvues de toute bordure marginale."

But taking leave of badly preserved and bleached stuffed specimens I now proceed to give a better exposition of the two *Cynopterus*-species with white-bordered ears, *C. marginatus* and *C. brachyotis*, based upon fresh material, preserved in alcohol, recently received from Java and Sumatra.

C. brachyotis at a glance is distinguished from *C. marginatus* by its white fingers, strikingly contrasting with the dark wing-membranes, smaller ears, more elongate muzzle and smaller head.

The tinge of the hairs on the back of *C. marginatus* is

somewhat black, meanwhile in *C. brachyotis* a more brownish tinge prevails. In the males of *C. brachyotis* (sometimes too present in the females) the collar is much more developed and generally redder colored than in male-specimens of *C. marginatus*.

The dimensions, in Millimeters, taken from about twenty specimens of *C. brachyotis* and several specimens of *C. marginatus* vary as follows:

	C. brachyotis.	*C. marginatus.*
Length ear (anteriorly) . . .	15—17	18—20,5
» ear to eye	9—11	13—14
» eye to tip of nostril.	10,5—11	12—13
» forearm	60—70	75—80
» second finger.	101—117	126—133
» fourth finger	78—80	97—102
» tibia, foot and claws.	35—42	49—52

I failed to detect difference in length in the sexes; all the measured specimens are fullgrown, f. i. pregnant females. They have been collected by Mr. Kannegieter in Java (Buitenzorg), and in Sumatra (Deli-Bedagei, Krapoh and Palembang, Lahat) and have been presented to our Museum by Mr. J. R. H. Neervoort van de Poll.

Kerivoula pellucida Waterhouse.

Waterhouse described this species after a specimen collected by Mr. Cuming in the Philippine Islands (P. Z. S. 1845) and presented by the latter to the Zoological Society's collection. According to Dr. Dobson (Catalogue, Indian Museum, 1876) the type is an adult ♂ preserved in alcohol; in 1878 (Catalogue, Chiroptera, British Museum) Dobson has exhibited a second, specimen, a young ♀, too from the Philippines: his descriptions and measurements given in 1878 exactly and verbally agree with those given in 1876. Mr. Tomes (P. Z. S. 1858) said that the examination and comparison of Waterhouse's type-specimen of

V. pellucidus and the type of Horsfield's *K. hardwickii* has proved beyond question their identity and he gives the dimensions taken from the type-specimen of *V. pellucidus*, adding that the dimensions may be considerably altered by the state of preservation of that specimen. And indeed if we compare the measurements given by Waterhouse, Tomes and Dobson, it seems somewhat difficult to believe that they have all been taken from one and the same specimen.

	Waterhouse, 1845	Tomes, 1858	Dobson. 1876,1878.
Longitudo ab apice rostri ad caudae basin.	1,8	1,9 . . .	1,65
Longitudo caudae	1,9½ . . .	1,11 . .	2.
» antibrachii . . .	1,3	1,3 . . .	1,25
» auris	0,7	0,7 . . .	0,7
Alarum amplitudo	9,6	10,6	
Length of head		0,8 . . .	0,6
» » tragus		0,4 . . .	0,35
» » longest finger		2,10½ .	2,9
» » fourth finger, ...		2,1 . . .	2.
» » foot and claws.		0,4 . . .	0,3

Dobson (Catalogue, 1876) again separated *pellucida* from *hardwickii*; he said that Tomes confounded the two species and that the size and shape of the ears at once distinguish the species.

I am not aware that after the year 1878 *Kerivoula pellucida* has been mentioned in scientific papers or other publications, and I think that, except the type and a young specimen in the British Museum, both from the Philippines, no specimen has reached Europe.

In the above mentioned collection there are four specimens, from Krapoh, Deli-Bedagei, East Sumatra, a male and three females, which I, without any hesitation, enregister as *Kerivoula pellucida* Waterhouse. It is at once distinguished from *K. hardwickii* by its color, size and shape of the ears and different length of body and wings.

Meanwhile in *hardwickii* a rather dark tinge prevails and the difference between upper- and under parts of the body hardly is perceptible, in *pellucida* the upper parts are of a brownish red, meanwhile the underparts are much lighter colored so that those parts make the impression of being whitish.

In *hardwickii* the muzzle is very hairy, in *pellucida* however that part is provided with a few scattered hairs, so that at first glance one would believe the muzzle to be bald.

With regard to the ears I refer to Dobson's description.

Measurements in Mm. of the four Sumatra-specimens preserved in alcohol in our Museum:

	K. pellucida.				*K. hardwickii.*
	♂	♀	♀	♀	♂
tail	40	41	42	45	55
ear	14,5	15,5	15,5	16	12,5
tragus	8,5	8,5	9	8,5	7
forearm	30	30	31	32	33
second finger	67	66	67,5	70	72
fourth finger	49	50	49	51	52
foot and claws	6,5	6,5	6,5	7	7

As may be seen from the above measurements *K. pellucida* always is smaller in all directions except in length of ear and tragus, which parts constantly are strikingly of a much larger size, relatively and absolutely.